

Notice of Allowability

Application No.

10/633,552

Examiner

Wayne Langel

Applicant(s)

KIKKAWA ET AL.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received:

The Drawings filed 8-5-03 are approved.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

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The following is an examiner's statement of reasons for allowance: Applicants admit that the inner surface polishing process is applied frequently for preventing adsorption of water or impurity gases to the inner surface of a high pressure vessel and keeping the high purity of the filled gas. (See pages 1-3 of applicants' specification.) However applicants do not admit that it is known to polish the inner surface of a high pressure gas container mainly made of iron, which has had a pressure test by hydraulic pressure, by 5 to 100 microns thickness on average such that the value of dividing the area of the Si2s peak by the area of the Fe2p_{3/2} peak in the X-ray photoelectron spectrum of the container inner surface is 0.3 or less, as required by claims 1, 2, 5 and 6. Nor is there any teaching, disclosure, suggestion, or motivation in the prior art to do so. Applicants' specification discloses in the paragraph bridging pages 3 and 4 that the impurity causing the purity decline in the halogen containing gas is a silicon halide produced by the reaction of the residual Si content on the container inner surface with the filled gas, and the production of the silicon halide can be restrained by reducing the Si residual amount in the container inner surface top layer part quantitatively determined by X-ray photoelectron spectroscopy to a certain level or less so that the purity decline of the halogen containing gas can be prevented. Accordingly claims 3 and 4 are also allowable, since they require that the halogen containing gas be filled in a high pressure gas container process by polishing the inner surface of a high pressure gas container mainly made of iron, which has had a pressure test by hydraulic pressure, by 5 to 100 microns thickness on average such that the value of dividing the area of the Si2s peak by the area of the Fe2p_{3/2} peak in the X-ray photoelectron spectrum of the container inner

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surface is 0.3 or less. Although halogen containing gases filled in high pressure gas containers are well-known (see col. 2, lines 11-36 of Bealky et al (US 5,928,743) and col. 1, lines 11-44 of Zdunek et al (US 6,290,088), for example), the halogen containing gas filled in the high pressure container recited in claims 3 and 4 would not be obvious thereover since the container would be different in that the recited polishing step would restrain the production of silicon halide so that the purity decline of the halogen containing gas can be prevented, as discussed earlier.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Langel whose telephone number is 571-272-1353. The examiner can normally be reached on Mondays to Fridays from 8 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Wayne A. Langel". The signature is written in a cursive, flowing style with a large, prominent "W" and "L".

Wayne Langel
Primary Examiner
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